



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/652,267	08/29/2003	Uri Elzur	13782US03	1986
23446	7590	08/19/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			AVELLINO, JOSEPH E	
			ART UNIT	PAPER NUMBER
			2143	

DATE MAILED: 08/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/652,267

Applicant(s)

ELZUR ET AL.

Examiner

Joseph E. Avellino

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/29/04</u>   | 6) <input type="checkbox"/> Other: _____                                    |

5.1.02

### **DETAILED ACTION**

1. Claims 1-33 are presented for examination; claims 1, 16, and 25 independent.

#### ***Claim Objections***

2. Claims 3, 4, 18, and 27 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. These claims depend upon the limitation that *at least one of* a receive internal elastic buffer and a transmit internal elastic buffer, requiring only one of a receive or transmit buffer, therefore at least one of the two claims is not limiting of the parent claim. Correction is required.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:  

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 12, and 16-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Claim 12 recites the limitation that "said NIC does not require a TOE". A TOE is not defined in the claim or any parent claim. Correction is required. For examination purposes this will be understood as a TCP Offload engine.

Art Unit: 2143

6. Claims 16-33 uses acronyms which are not defined in any parent claim.

Although they are defined in claim 1, this does not carry over to the other independent claims, since these are different chains. Correction is required.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 7-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Boucher et al. (USPN 6,757,746) (hereinafter Boucher).

8. Referring to claim 1, Boucher discloses a system for offloading TCP processing, the system comprising:

a host 100 (Figure 1);

a network interface card (i.e. network interface device 102) (Figure 1) coupled to said host (see parallel bus connecting 102 with 100), said NIC comprising:

a TCP enabled Ethernet controller (i.e. NIC including the ASIC 400

disclosed in Figure 21 of app. no. 09/464,283, USPN 6,427,173 incorporated by

reference) comprising at least one internal elastic buffer (i.e. the transmit and receive sequencer 2104, 2105 Figure 21 of '173), wherein said TEEC processes an incoming TCP packet once and temporarily buffers at least a portion of said incoming TCP packet in said internal elastic buffer, said processing occurring without reassembly (i.e. the packet is DMA'd over to the host memory 110 and no reassembly done within the TEEC) (col. 5, lines 40-60).

9. Referring to claim 2, Boucher discloses said at least one internal elastic buffer comprises a receive internal elastic buffer 2105 and a transmit internal elastic buffer 2104 (Figure 21, col. 25, lines 1-15 of '173).

10. Referring to claims 3 and 4, Boucher discloses incoming TCP packets are temporarily buffered in said receive buffer and outgoing TCP packets are temporarily buffered in said transmit elastic buffer (col. 17, lines 35-67; col. 25, lines 1-15 of '173).

11. Referring to claim 5, Boucher discloses said TEEC places at least a portion of said incoming TCP packet data into at least a portion of a host memory (Boucher, Figure 2; col. 5, lines 50-55).

12. Referring to claim 7, Boucher discloses out of order TCP packets are not reordered in a TEEC buffer (i.e. they are reordered in the host memory) (Figure 2).

Art Unit: 2143

13. Referring to claim 8, Boucher discloses said NIC does not require a dedicated memory for reordering out of sequence TCP packets (i.e. the host memory is used) (Figure 2).

14. Claim 9 is rejected for similar reasons as stated above (i.e. it is inherent that any packet received would be inserted in its correct placement in host memory as shown by Figure 2).

15. Claims 10-13 are rejected for similar reasons as stated above (i.e. the Office takes the term "highest hierarchy" as the best place to put the information, and "single copy operation" as a DMA transfer).

16. Referring to claim 14, Boucher discloses the TEEC comprises a single chip having the buffer integrated therein (i.e. integrated into the Apollo VT8501 MVP4 Northridge chip) (col. 6, lines 15-25).

17. Claims 15-33 are rejected for similar reasons as stated above.

***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2143

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher.

20. Boucher discloses the invention substantively as described in claim 1. Boucher does not specifically state that only the elastic buffer is used to temporarily buffer at least a portion of the incoming TCP packet, however it is well known that elastic buffers are used to buffer packets (i.e. receiving FIFO's for routers, etc.). BY this rationale, "Official Notice" is taken that both the concept and advantages of providing for utilizing only the elastic buffer to temporarily buffer a portion of the TCP packet is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to modify the teaching of Boucher to include that only the elastic buffer is used to buffer the packet in order to utilize faster on chip memory rather than off-chip RAM, resulting in

Art Unit: 2143

faster uploads to the host processor as well as reduced overhead regarding retrieving information from off chip memory.

### ***Conclusion***

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

22. Applicant employs broad language, which includes the use of word, and phrases, which have broad meanings in the art. In addition, Applicant has not argued any narrower interpretation of the claim language, nor amended the claims significantly enough to construe a narrower meaning to the limitations. As the claims breadth allows multiple interpretations and meanings, which are broader than Applicant's disclosure, the Examiner is forced to interpret the claim limitations as broadly and as reasonably possible, in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir.1993). Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response, and reiterates the need for the Applicant to more clearly and distinctly, define the claimed invention.



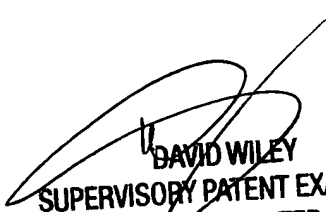
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JEA  
August 9, 2005



DAVID WILEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100